UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

November 2, 1992

Mr. Robert Chase
Chief, Risk Management Office
Department of the Army
U.S. Army Laboratory Command
Materials Technology Laboratory
Watertown, Massachusetts 02172-0001

Dear Mr. Chase:

Thank you for your letter of October 26, 1992. As we understand from your letter and a telephone conversation of October 28, 1992, your facility is undergoing a decommissioning and you need to classify the regulatory status of some beryllium-contaminated equipment for waste disposal. Based on your description of the two categories of wastes generated at your facility, we conclude neither meets the definition of a listed hazardous waste. Our rationale for this conclusion is described below.

In your Category 1 scenario, two glove boxes became contaminated with beryllium metal powder that was then used to form metal alloys. The wastes found in the glove boxes or the contaminated glove boxes themselves are not considered a listed waste. The P015 listing in 40 CFR 261.33(e) (beryllium dust) only applies to the powdered metal when disposed of unused. The powdered beryllium in this case has been used (when processed in the glove boxes), so the residuals formed after use (your Category 1 equipment) do not meet the listing description.

In your Category 2 scenario, beryllium particles are found on metal machining equipment as well as filters, cyclones, and blowers connected to a vacuum exhaust system. The beryllium residue was created by the machining of solid beryllium metal and beryllium alloys.

In this instance, the beryllium found on the machining equipment and air exhaust system is not considered a listed hazardous waste. The listing in §261.33(e) applies to beryllium dust that is an unused commercial chemical product, not beryllium particles created in normal machining operations (unless the purpose of the operation is to create the beryllium dust or powder as a commercial chemical product).

Please note that if any of the above mentioned wastes exhibit a characteristic of hazardous waste described in 40 CFR 261.20 - 261.24 (ignitability, corrosivity, reactivity, or toxicity characteristic), the waste(s) may still be considered hazardous wastes. In addition, you should be aware that the State of Massachusetts may have regulations for the waste(s) more stringent than those of the Federal government. Please contact the State to find out if the State's definitions are different from those of EPA.

Thank you for your inquiry. If you have any additional questions on this topic, please contact Ron Josephson of my staff at (202) 260-6715.

Sincerely,

Rick Brandes
Chief
Waste Identification Branch

DEPARTMENT OF THE ARMY
U.S. ARMY LABORATORY COMMAND
MATERIALS TECHNOLOGY LABORATORY
WATERTOWN, MASSACHUSETTES 02172-0001

October 26, 1992

Headquarters, Environmental Protection Agency
ATTENTION:MR, RICK BRANDES, OS-333
CHIEF, WASTE IDENTIFICATION BRANCH
CHARACTERIZATION & ASSESSMENT DIVISION
401 M STREET, SW
WASHINGTON, D.C. 20460

Dear Mr. Brandes,

The U.S. Army Materials Technology Laboratory located in Watertown, Massachusetts is undergoing decommissioning in accordance with the requirements of the U.S. Nuclear Regulatory Commission, in order to meet the requirements of the Base Closure and Realignment Act of 1988. The installation is scheduled for closure by September 1995 and is working to comply with the Low-Level Waste Policy Act of 1985 as part of the closure decommissioning effort. We request your affirmation of our classification of some beryllium contaminated equipment for waste disposal as soon as possible. We need to dispose of the equipment in early November in order to adhere to our schedule for disposal of all radioactive waste by end December 1992.

The equipment in question is divided into two categories for discussion here. Category 1 consists of two glove boxes and a vacuum exhaust system. The beryllium was deposited on this equipment by mixing of chemical product beryllium in glove boxes to form metal alloys. Category 2 consists of approximately twenty pieces of metal machining equipment also connected to the exhaust system. The beryllium was deposited on equipment in Category 2 by machining solid metallic metals of beryllium and beryllium alloys. Equipment in each category is contaminated with beryllium and other metals, including depleted uranium. The depleted uranium causes the equipment to be classified as low-level radioactive waste.

Equipment in each category was connected to a vacuum exhaust system. The vacuum lines lead to cyclone separators, filter, and blowers on the third (top) floor of the building and filtered air exhausted through the roof.

We have classified the equipment in Category 1 as a mixed waste based on the presence of depleted uranium and the virgin beryllium powder from the chemical process (hazardous waste code P015).

We classified the equipment in Category 2 as non-hazardous, low-level radioactive

waste. We made this classification on the basis that the beryllium on the equipment in Category2 is in the form metal turnings, fine particles and dust from the machining activity, therefore a process waste. The finest particles were processed through the exhaust system.

We considered the beryllium turnings and particles created during machining of the metals to be non-reactive and non-ignitable since the residues were generated in an open atmosphere where the residue oxidized on the surface of the equipment. In addition, the diameter of the beryllium residue created during the machining process are not of a concentration large enough to create an explosion. We, therefore consider the beryllium particles on the equipment to be neither a reactive, ignitable or listed hazardous waste.

We are enclosing correspondence between the U.S. Department of Energy (DOE) and one of their contractors, Brush Wellman Inc., that describes a similar situation where DOE investigated the listing of beryllium as a listed hazardous waste. In this correspondence, Brush Wellman Inc. questioned the classification of beryllium waste generated from processes involving metallic beryllium as being a P015 listed hazardous waste as defined in 40 CFR 261.22. The Brush Wellman letter dated September 10, 1990 states that they confirmed with EPA, Waste Characterization Branch, that the term "Beryllium" is a misprint in the regulations and should be described as "Beryllium dust". We request you reaffirm this conclusion for the purposes of giving us a clear understanding of this issue.

If at all possible, please provide your affirmations on this issue by October 31, 1992. We are in need of as much planning and organization prior to the waste shipments by the beginning of November. Your assistance in this matter is greatly appreciated.

Sincerely yours,

Robert Chase
Chief, Risk Management Office

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